4.22 Disturbed Area Stabilization (Sodding)

Ds4

Definition

Stabilizing fine-graded disturbed areas by establishing permanent grass stands with sod.

Purposes

Sodding is used for the following:

1. to establish permanent turf immediately,
2. to prevent erosion and damage from sediment and runoff by stabilizing the soil surface,
3. to reduce the production of dust and mud associated with bare soil surfaces, and
4. to stabilize drainage ways where concentrated overload flow will occur.

Conditions

Sodding should be applied under the following conditions:

1. Disturbed areas that require immediate vegetative covers or where sodding is preferred to other means of grass establishment.

2. Locations particularly suited to stabilization with sod, including:

   - Waterways carrying intermittent flow
   - Areas around drop inlets in grassed swales
   - Residential or commercial lawns where quick use or aesthetics are factors

Planning Considerations

The successful establishment of quality turf grass is difficult. Extremes in temperature and moisture availability create severe stresses on both cool and warm season grasses. The selection of appropriate turf-establishment methods requires a great deal of forethought.

A quality turf containing the recommended mixtures and species can be established with either seed or sod. Soil preparation for the two methods is the same.

The advantages of properly installed sod include:

- Immediate erosion control.
- An instant green surface with no dust or mud.
- Nearly year-round establishment capability.
- Less chance of failure than with seed.
- Freedom from weeds.
- Quick use of the sodded surface.
- The option of buying a quality-controlled product with predictable results.

It is initially more costly to install sod than to seed. However, this cost is justified in places where sod can perform better than seed in controlling erosion.

In swales and waterways where concentrated flow will occur, properly pegged sod is preferable to seed because there is no lag time between installation and the time when the channel is protected by vegetation.

Drop inlets to be placed in grassed areas can be kept free of mulch, seed, and mud, and the grade immediately around the inlet can be maintained, by framing the inlet with sod strips.

As long as adequate water is available for irrigation in the early weeks, sod can be laid during times of the year when seeded grass may fail.

Ground preparation and proper maintenance are also important with sod. Sod is composed of living plants and those plants must receive adequate care in order to provide vegetative stabilization on a disturbed area.

Specifications

Soil Preparation

1. Prior to soil preparation, areas to be sodded shall be brought to final grade in accordance with the approved plan.

2. Soil tests should be made to determine the exact requirements for lime and fertilizer.

   Under difficult circumstances where it is not possible to obtain a soil test, the following soil amendments shall be made:

   - Pulverized agricultural limestone at 100 pounds per 1,000 square feet (2 tons per acre). Note: Only carbonate forms of lime may be used.

   - Fertilizer at 25 pounds per 1,000 square feet (1,000 lbs./acre) of 10-10-10 in fall or 25 pounds per 1,000 square feet of 5-10-10 in spring. Note: Equivalent nutrition may be applied with other fertilizer formulations.

   These amendments shall be spread evenly over the area to be sodded, and incorporated into the top 3 to 6 inches of soil by discing, harrowing or other acceptable means.

3. Prior to laying sod, the soil surface shall be clear of trash, debris, roots, branches, stones, and clods in excess of 2 inches in length or diameter. Sod shall not be applied to gravel or other non-soil surfaces.

4. Any irregularities in the soil surface resulting from topsoil or other operations shall be filled or leveled in order to prevent the formation of depressions of toxic materials.

Quality of Sod

1. Sod shall be machine cut at a uniform soil thickness of ¾-inch, plus or minus ¼-inch, at the time of cutting. Thickness shall exclude shoot growth and thatch.

2. Pieces of sod shall be cut to the supplier's standard width and length, with a maximum allowable deviation in any dimension of 5 percent. Torn or uneven pads should not be used.

3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended from a firm grasp on one end of the section.

4. Sod shall not be cut or laid in excessively wet or dry weather.

5. Sod should be harvested, delivered, and installed within a period of 36 hours.

Sod Installation

1. Sod should not be laid on soil surfaces that are frozen.

2. During periods of high temperature, the soil shall be lightly irrigated immediately prior to laying the sod, to cool the soil and reduce root burning and dieback.

3. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and butting tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids that would cause drying of the roots.

4. On slopes 3:1 or greater, or wherever erosion may be a problem, sod shall be laid with staggered joints and secured by pegging or other approved methods. Sod shall be installed with the length perpendicular to the slope (on the contour).

5. As sodding of clearly defined areas is completed, and sod shall be rolled or tamped to provide firm contact between roots and soil.

6. After rolling, sod shall be irrigated to a depth sufficient that the underside of the sod pad and the soil 4 inches below the sod is thoroughly wet.

7. During the first week, in the absence of adequate rainfall, watering shall be performed as often as necessary to maintain moist soil to a depth of at least 4 inches.

8. The first mowing shall not be attempted until the sod is firmly rooted, usually 2 to 3 weeks. Not more than one-third of the grass leaf shall be removed at any one cutting.

Sodded Waterways

1. Care should be taken to prepare the soil adequately in accordance with this specification. The sod type shall consist of plant materials able to withstand the designed velocity.

2. Sod strips in waterways shall be laid perpendicular to the direction of flow. Care should be taken to butt ends of strips tightly.

3. After rolling or tamping, sod shall be pegged or stapled to resist washout during the establishment period. Chicken wire, jute, or other netting may be pegged over the sod for extra protection in critical areas.

4. All other specifications for this practice shall be adhered to when sodding a waterway.

Maintenance of Established Sod

1. After the first week, sod shall be watered as necessary to maintain adequate moisture in the root zone and prevent dormancy of sod.

2. No more than one-third of the shoot (grass leaf) should be removed in any mowing. Grass height should be maintained between 2 and 3 inches unless otherwise specified.

3. After the first growing season, established sod will require fertilization and may require lime. Follow soil-testing recommendations when possible, or use the rates indicated below.

Maintenance Fertilization of Established Sod with 20-10-10
(Equivalent amounts of nutrients may be applied with other formulations.)

	Kentucky-31 Tall Fescue		Kentucky Bluegrass		Bermuda Grass	
Grasses	**lb/Acre**	**lb/1000 sf**	**lb/Acre**	**lb/1000 sf**	**Lb/Acre**	**lb/1000 sf**
September	250	6	250	6	-	-
October	250	6	250	6	-	-
December	250	6	250	6	-	-
May	-	-	-	-	200	5
June	85*	2	85*	2	-	-
July	-	-	-	-	200	5
August	-	-	-	-	200	5

*Only if there is an obvious need for fertilizer at this time.